PHYSICO-CHEMICAL PROPERTIES AND MICROSTRUCTURE OF DANGKE CHEESE BY INOCULATED OF *Lactococcus lactis* at DIFFERENT TEMPERATURE STORAGE

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ABSTRACT

Dangke which is a traditional cheese Enrekang South Sulawesi has self life only a few days and have a quality that is still often varied and less good. Dangke quality can be improved with the ripening process. *Lactococcus lactis* is usually used as a starter in the manufacture of cheese ripening, including Dangke (traditional cheese of Indonesia). The purpose of this study is to improve the quality of dangke by ripening and inoculation of starter culture bacteria to obtain fermented dangke as other types of fermentation cheese. The changes in physic-chemical properties and microstructure of Dangke cheese made from cow fresh milk, coagulated with papaya sap and inoculated by *Lactococcus lactis* were investigated during 0 - 6 days ripening period. Physicochemical data were statistically processed by analysis of variance followed by the least significant difference test, while the micro data processed descriptively. The results showed that the ripening time indicates that provide an opportunity for *L. lactis* to continue to be active on carbohydrate metabolism, resulting in a decrease in lactose, and pH. Results also showed that the moisture and fat content decreased, lactic acid and total protein increased. Microstructure observations indicate that the fat globules varying magnitude and matrix proteins are not evenly distributed but look more compact in dangke with the maturation of six days.

Keywords: Dangke, duration of ripened, *Lactococcus lactis*, physicochemical properties, micro-structural properties.